

Amendments to the claims

1-58. (canceled).

59. (withdrawn) An electrical connector comprising:

a base member, wherein the base member includes a first surface operative to accept a connection end of a flexible electrode array adjacent the first surface;

a head member in movable connection with the base member, wherein the head member includes a second surface, wherein the head member is operative to move between a closed position and an open position, wherein in the closed position the head member is operative to clamp the connection end between the first and second surfaces, wherein in the open position, there is sufficient space between the first and second surfaces to enable the connection end to freely move with respect to the first and second surfaces; and

a shaft member, wherein the shaft member is operative to rotate axially, wherein the shaft member includes a cam surface, wherein when the shaft member rotates the cam surface is operative to urge the head member in a direction with respect to the base such that the distance between the first and second surfaces changes.

a plurality of electrical contacts arranged in a predetermined pattern, wherein the pattern corresponds to the location of the traces on the connection end, wherein when the connection end is clamped between the first and second surfaces, each electrical contact is in electrical connection with the corresponding trace.

60. (withdrawn) The electrical connector recited in claim 59, further comprising a printed circuit board, wherein the electrical contacts are in supporting connection with the printed circuit board.

61. (withdrawn) The electrical connector recited in claim 60, wherein the second surface includes printed circuit board.

62. (withdrawn) The electrical connector recited in claim 61, wherein the first surface includes a layer of foam.

63. (withdrawn) The electrical connector recited in claim 60, wherein the first surface includes the printed circuit board.

64. (withdrawn) The electrical connector recited in claim 59, wherein the head member includes a follower member extending in a direction opposite the second surface, wherein as the shaft member rotates, the cam surface is operative to urge the follower member in a direction that changes the distance between the first and second surfaces.

65. (withdrawn) The electrical connector recited in claim 64, wherein the head member is biased to the closed position.

66. (withdrawn) The electrical connector recited in claim 59, wherein the first surface includes at least one alignment pin, wherein when the connection end is placed between the first and second surfaces, the alignment pin is operative to guide the connection end to a specific position adjacent the first and second surfaces, wherein when the connection end is in the specific position, each electrical contact is aligned with one of the traces on the connection end.

67. (withdrawn) The electrical connector recited in claim 59, wherein the electrical contacts are in operative connection with a buffer/amplifier.

68. (withdrawn) The electrical connector recited in claim 67, further comprising a housing, wherein the buffer/amplifier and the head member are enclosed within the housing.

69. (withdrawn) The electrical connector recited in claim 68, wherein the housing includes a slot therethrough, wherein when the connection end is inserted through the slot, the connection end slides between the first and second surfaces.

70. (withdrawn) The electrical connector recited in claim 68, wherein the shaft member includes a lever, wherein the lever provides increased leverage for rotating the pivot member, and wherein the lever is accessible outside of the housing.

71. (withdrawn) The electrical connector recited in claim 68, wherein the housing includes a clip, wherein the clip enables the attachment of the housing to a patient.

72. (currently amended) A method for connecting a flexible electrode array comprising:

- a) removing a cover sheet from an electrode array, wherein the array has a generally sheet like connection end with a plurality of electrically conductive traces thereon;
- b) applying the electrode array to a patient;
- c) removing a release sheet from the electrode array; and
- d) operatively engaging inserting the connection end into a throat area of with a connector body to place, wherein the traces in electrical communication with engage a plurality of electrical contacts of the connector body in the throat area.

73. (currently amended) A The method according to claim 72, further comprising the step:

- e) clamping the connection end within a the throat area of the connector body, wherein the traces are in electrical connection with the electrical contacts.

74. (currently amended) ~~A~~ The method according to claim 73, wherein each trace includes an electrical signal propagating therethrough, and further comprising the step:

- f) Amplifying amplifying each ~~the~~ electrical signal with an amplifier a buffer/amplifier in electrical connection with the electrical contacts.

75. (currently amended) ~~A~~ The method according to claim 72, further comprising the step:

- e) lifting a connection end tail flap of the electrode array to expose the electrically conductive traces.

76. (new) The method according to claim 73, wherein in (d) the connector body comprises a base member and a head member, wherein the throat area extends between the base member and the head member, wherein at least one of the base member and the head member is in operative connection with the electrical contacts, wherein the connector body further comprises a shaft member in operative connection with a cam surface, wherein (e) includes:

- f) rotating the shaft member axially;

g) responsive to (f) causing with the cam surface the head member to move relative the base member such that the connection end of the electrode array is clamped between the head member and the base member.

77. (new) The method according to claim 72, wherein in (a) the electrode array includes a flexible and generally electrically non-conductive substrate sheet, wherein the substrate sheet includes opposed first and second side surfaces, wherein the electrode array includes a plurality of electrically conductive electrodes in supporting connection with the first side surface of the substrate sheet, wherein the traces extend between the connection end and the electrodes, wherein (a) includes removing the cover sheet from the first side surface of the substrate sheet, wherein prior to (c) the release sheet is in releasably adhesive connection with portions of the second side surface of the substrate sheet which support the electrodes, wherein (c) includes removing the release sheet from the second side surface.

78. (new) The method according to claim 77, wherein in (a) the substrate sheet includes a plurality of perforations therethrough, wherein the perforations extend in generally surrounding relation of each of the electrodes and enable movement of each of the electrodes relative to each other, wherein the release sheet has a plurality of apertures therethrough, wherein portions of the release sheet between the apertures are in adhesive connection with the portions of the substrate sheet which support the electrodes.